REMARKS

This is intended as a full and complete response to the Office Action dated March 24, 2004, having a shortened statutory period for response set to expire on June 24, 2004. Please reconsider the claims pending in the application for reasons discussed below.

Pending claims 19, 20, 22-25, 27, 32-36, 38-40 and 96-101 are shown above. Claims 19, 20, 22-25, 27, 32-36, 38-40, 96, 97, 100 and 101 stand rejected, and claims 98 and 99 are indicated to be allowable by the Examiner. Claims 19, 20, 23-25, 27, 32, 35, 36, 38-40, and 96-101 have been amended to clarify aspects of the invention and new claims 102-104 have been added. Applicants believe no new matter has been added. Reconsideration of the rejected claims is requested for reasons presented below.

Applicants wish to thank the Examiner for her time in a telephonic interview with Applicant's representative conducted on February 27, 2004. A summary of that interview is attached to this response.

Claims 19-20, 22-25, 38-40 and 101 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,632,335 to *Kunisawa, et al.* on grounds that *Kunisawa* discloses a substrate processing apparatus having an evaporation shield (Figure 42, 210) adapted to be positioned over a substrate contacting a substrate support (230), the evaporation shield having a fluid retaining surface adapted to form a gap (244) with respect to the substrate, wherein the thickness of the gap is between about 0.5mm and about 4mm.

Applicants respectfully traverse the rejection and respectfully submit that *Kunisawa* teaches a holding tool (Figure 42, 232) containing an anode plate (Figure 42, 238) and a porous ceramic plate (Figure 42, 242) that are separated by a plating liquid (Figure 42, 210) at a thickness of about 1.5 mm (Figure 42, S_2). The porous ceramic plate is bounded on a lower surface by the plating liquid (Figure 42, 210) at a thickness of about 2mm (Figure 42, S_1). See col. 32, line 51 to col. 33, line 22. The holding tool, anode plate, porous ceramic plate, and the two plating liquid gaps are adapted to be positioned over a substrate (Figure 42, W) contacting a substrate plating stand (Figure

42, 230). However, *Kunisawa* does not teach a fluid impermeable evaporation shield adapted to be positioned over a substrate positioned on a substrate support, as recited in claim 19. The element 210 which the Examiner refers to as an evaporation shield is the plating liquid. Further, *Kunisawa* does not teach a fluid impermeable evaporation shield that contains a fluid retaining surface adapted to form a gap with respect to the substrate as recited in claim 19. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 19 and of claims 20, 22-25, 38-40, and 101, which depend therefrom.

With regard to claim 20, the Examiner states that the shield of *Kunisawa* (Figure 42, 210) is sized to substantially cover the substrate. Applicants traverse the rejection and respectfully submit that *Kunisawa* does not teach a fluid impermeable evaporation shield sized to have an outer diameter that is greater than or equal to an outer diameter of the substrate, as recited in claim 20. Therefore, reconsideration of claim 20 is respectfully requested.

Claim 27 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,632,335 to *Kunisawa, et al.*, as applied to claims 19-20, 22-25, 38-40 and 101, in view of German Patent No. 29922090U1 to *Sotralentz*. The Examiner states that *Kunisawa* discloses a substrate processing apparatus, having an evaporation shield (Figure 42, 210) without a degassing membrane, however, *Sotralentz* teaches a degassing membrane. Therefore, the Examiner concluded that it would have been obvious to combine the references to generate the claimed invention.

Applicants respectfully traverse the rejection and submit that *Kunisawa*, as discussed above, and *Sotralentz* do not teach a fluid impermeable evaporation shield adapted to be positioned over a substrate positioned on a substrate support, the fluid impermeable evaporation shield having a fluid retaining surface adapted to form a gap with respect to the substrate, as recited in claim 19. Applicants respectfully submit that claim 19 is allowable, and as such claim 27, which depends thereon, is also allowable. Withdrawal of the rejection is respectfully requested.

Claims 32 and 33 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,632,335 to *Kunisawa, et al.*, in view of U.S. Patent No. 4,120,699 to *Kennedy, Jr., et al.* The Examiner states that *Kunisawa* fails to teach a

transducer coupled to/disposed against the evaporation shield to provide acoustic waves to the fluid layer. However, the Examiner indicates that *Kennedy, Jr.* teaches a plurality of transducers attached to a cylindrical tank, and as such, it would have been obvious to combine *Kunisawa* with *Kennedy, Jr.* to generate the claimed invention.

Applicants respectfully traverse the rejection and submit that *Kunisawa* and *Kennedy, Jr.*, individually or in combination, do not teach or suggest a substrate processing apparatus having an evaporation shield with an outer diameter that is greater than or equal to an outer diameter of a substrate positioned on a substrate support member, as recited in claim 32. Further, the cited references do not teach or suggest a shield that has a substantially planar lower surface adapted to form a gap with respect to the substrate, as recited in claim 32. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 32 and of claim 33, which depends therefrom.

Claim 34 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,632,335 to *Kunisawa, et al.* and U.S. Patent No. 4,120,699 to *Kennedy, Jr. et al.*, as applied to claims 32 and 33 above, further in view of U.S. Patent No. 6,224,713 to *Hembree, et al.* The Examiner states that *Kunisawa* and *Kennedy* fail to teach a transducer having a rod adapted to contact a fluid layer. However, the Examiner indicates that *Hembree* teaches a submersible rod mounted to a transducer, and as such, it would have been obvious to combine *Kunisawa* and *Kennedy* with *Hembree* to generate the claimed invention.

Applicants respectfully traverse the rejection and submit that *Kunisawa* and *Kennedy,* as discussed above, and *Hembree*, either alone or in combination, do not teach or suggest a substrate processing apparatus having an evaporation shield with an outer diameter that is greater than or equal to an outer diameter of a substrate positioned on a substrate support member, as recited in claim 32. Further, the cited references do not teach or suggest an evaporation shield that has a substantially planar lower surface adapted to form a gap with respect to the substrate, as recited in claim 32. As claim 34 includes the limitations of claim 32, Applicants submit that *Kunisawa, Kennedy*, and *Hembree*, individually or in combination, do not provide all of the

limitations of claim 34. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 34.

Claims 35 and 36 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,632,335 to *Kunisawa, et al.* as applied to claims 19-20, 22-25, 38-40 and 101 above, in view of U.S. Patent No, 5,853,961 to *Sakai, et al.* The Examiner states that *Kunisawa* fails to teach an evaporation shield having a seal adapted to contact a substrate support or a substrate support having a seal adapted to contact an evaporation shield. However, the Examiner states that U.S. Patent No. 6,224,713 to *Hembree* teaches a sealing O-ring between a shield and a substrate support, and as such, it would have been obvious to combine *Kunisawa* and *Hembree* to generate the claimed invention.

Applicants respectfully traverse the rejection and submit that the combination of *Kunisawa* and *Hembree* does not teach or suggest a substrate processing apparatus having a fluid impermeable evaporation shield adapted to be positioned over a substrate positioned on a substrate support, the fluid impermeable evaporation shield having a fluid retaining surface adapted to form a gap with respect to the substrate, as recited in claim 19. As claims 35 and 36 include the limitations of claim 19, Applicants submit that *Kunisawa* and *Hembree*, individually or in combination, do not provide all the limitations of claims 35 and 36. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection to claims 35 and 36.

Claims 96 and 97 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,632,335 to *Kunisawa, et al.*, in view of German Patent No. 29922090U1 to *Sotralentz.* The Examiner states that *Kunisawa* does not teach an evaporation shield having a degassing membrane and a plenum in communication with a degassing membrane or a plenum port coupled to a plenum. However, the Examiner states that *Sotralentz* teaches a degassing membrane disposed on a container top, and as such, it would have been obvious to combine *Kunisawa* and *Sotralentz* to generate the invention as claimed.

Applicants respectfully traverse the rejection and submit that the combination of *Kunisawa* and *Sotralentz* does not teach or suggest a moveable evaporation shield having a degassing membrane and a plenum in communication with the degassing

membrane, adapted to be positioned over a substrate on a substrate support, as recited in claim 96. Applicants respectfully request reconsideration and withdrawal of the rejection of claim 96 and of claim 97 which depends therefrom.

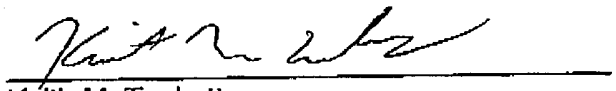
Claim 100 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,632,335 to *Kunisawa, et al.* as applied to claims 19-20, 22-25, 38-40 and 101 above, in view of U.S. Patent No. 4,821,675 to *Ikeno, et al.* The Examiner states that *Kunisawa* does not teach an evaporation shield adapted to provide heat to a fluid layer. However, the Examiner states that *Ikeno* teaches an evaporation shield/cover/lid adapted to provide heat to a fluid layer, and as such, it would have been obvious to combine *Kunisawa* and *Ikeno* to generate the invention as claimed.

Applicants respectfully traverse the rejection and submit that the combination of *Kunisawa* and *Ikeno* does not teach or suggest a fluid impermeable evaporation shield positioned over a substrate positioned on a substrate support as recited in claim 19. Further, the references alone or in combination do not teach a fluid impermeable evaporation shield having a fluid retaining surface to form a gap with respect to the substrate, wherein the thickness of the gap is between about 0.5 millimeters and about 4 millimeters, as recited in claim 19. As claim 100 includes the limitations of claim 19, *Kunisawa* in view of *Ikeno* does not provide all of the limitations of claim 100. Applicants respectfully request reconsideration and withdrawal of the rejection of claim 100.

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed.

Having addressed all issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



Keith M. Tackett
Registration No. 32,008
MOSER, PATTERSON & SHERIDAN, L.L.P.
3040 Post Oak Blvd. Suite 1500

Houston, TX 77056
Telephone: (713) 623-4844
Facsimile: (713) 623-4846
Attorney for Applicant(s)